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REEL
545

STANKEVICH, K.I.

STAKKEVICH, K.I. (Kiyev)

Hygienic evaluation of the microclimate of living quarters with floors made of plastic materials. Vrach. delo no. 3:110-112 Mr '61.
(MIRA 14:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut kommunal'noy gigiyeny.
(LABOR AND LABORING CLASSES—DWELLINGS—HYGIENIC ASPECTS)
(PLASTICS) (FLOORS)

STANKEVICH, K.I.

Hygienic evaluation of some plastic coverings for floors. Gig. i san.
26 no.6:21-25 Je '61. (MIHA 15:5)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta kommunal'noy
gigiyeny.

(FLOOR COVERINGS) (PLASTICS)

STANKEVICH, K.I., nauchnyy sotrudnik

Hygienic evaluation of floor covering made of plastic materials.
Gig.i san. 26 no.12:81-82 D '61. (MIRA 15:9)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta kommunal'-
noy gigiyeny.
(PLASTICS) (FLOOR COVERINGS) (AIR--POLLUTION)

STANKEVICH, K., nauchnyy sotrudnik

Hygienic evaluation of plastic floor coverings. Zhil. stroi. no.1:
12-13 '63. (MIR 16:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut kommunal'noy
gigiyeny.

(Floor coverings)

(Plastics)

STANKEVICH, K.I. (Kiyev)

Experimental data on the blastomogenic action of coumarone and
polychlorvinyl plastics. Vrach.delo no.11:108-114 N '62.

(MIRA 16:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut kommunal'noy
gigiyeny.

(PLASTICS--TOXICOLOGY) (GARCIINOGENESIS)

STANKEVICH, K.I. [Stankeych, K.I.], kand. med. nauk; OVDIYENKO, T.L.
[Ovdiyenko, T.L.]

Hygienic properties of some synthetic fabrics for clothing and
footwear. Leh. prom. no.3:26-29 JI-S '65. (MIRA 18:9)

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652910001-6

STANKEVICH, K.O.

42320. SEMIKIN, I.D., STANKEVICH, K.O.-Ispytaniye novoy golovki martenovskoy pechi.
Nauch. trudy (Dnepropetr. metallurg. in-t im. Stalina) VYP 1⁴, 1948, s
19-27.

SO: Letopis 'Zhurnal'nykh Statey, Vol. 47, 1948.

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652910001-6"

STAKEYEVICH, K. S., GETMANSEV, G. G. and TROITSKIY, V. S.

"Detection of Deuterium Monochromatic Radioemission in Waves of 91,
6 cm," paper submitted at the International Astronomical Union Radio Astronomy
Symposium, Jodrell Bank, UK, Aug 1955

A-40421-II

STANKEVICH, K. S.

NW

523.16 : 546.11.02

Monochromatic Radiation of Deuterium at a
Wavelength of 91.6 cm from the Centre of the
Galaxy. — G. G. Getmansev, K. S. Stankovich & V. S.
Troitski. (C. R. Acad. Sci. U.R.S.S., 111th Aug. 1955,
Vol. 103, No. 5, pp. 783-786. In Russian.) A brief
report is presented of observations indicating the
presence of deuterium in the interstellar space; the
concentration is about 3×10^{-4} that of the non-ionized

hydrogen. A block diagram is given of the equipment
used in conjunction with a $\lambda/2$ dipole aerial at the focus
of a 4-m-diameter parabolic reflector.

GP

498

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9/1

(2)

Trans. DS1 myt. # 83, Dec. 55 - D457725

Category : USSR/Radiophysics - Application of radiophysical methods

I-12

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 2007

Author : Getmantsev, G.G., Stankevich, K.S., Troitskiy, V.S.

Title : Monochromatic 91.6-cm Deuterium Radio Waves from the Center of the Galaxy.

Orig Pub : Tr. 5-go soveshchaniya po vopr. Kosmogonii. 1955, M., AN SSSR, 1956, 539-545

Abstract : See Ref. Zhur. Fiz., 1956, 20669

Card . 1 / 1

STANKEVICH, K. S., GERMANTSEV, G. G. and TROITSKIY, V. S.

"Observation of Deuterium Lines in Absorption Lines on a Wavelength of 91.6 cm," a report delivered by B. M. Chikhachev at the Symposium on Radioastronomy held at the Jodell-Bank Experimental Radioastronomical Station, Manchester University, England, is Summarized in the account of this symposium in an article by V. V. VITKEVICH in Vest. Ak. Nauk SSSR for January 1956.

Sum. 900, 26 Apr 1956

STANKEVICH, K.S.

Investigating radiowave emission of the galactic center on 91.6 cm wavelength [with summary in English]. Astron. zhur. 35 no.1:157-159 Ja-F '58. (MIRA 11:3)

1. Radiofizicheskiy institut Gor'kovskogo gosudarstvennogo universiteta im. N.I. Lobachevskogo.
(Milky Way) (Radio astronomy)

GS677

AUTHORS: Dr Leman-yev, Malakhov, A.M., V.P. Lezhkov, V.P., Barin, V.A.
PERIODICAL: Izvestiya, Vsesoyuznaya uchebnoye zavedeniye, Radiofizika, 1959, Vol 2, No 2, pp 154-158 (USSR)

ABSTRACT: The report of a joint Soviet-Chinese expedition to Macau (No - 18350328) on the island of Macau. The scientists used parabolic reflectors of diameter 1 m at the shorter wavelengths and 1.5 m at the longer. The fluctuations in the threshold of sensitivity were similarly 4° and 4°. The electrical axes of the aerials were parallel to one another. The absolute accuracy of the equality measurement was ± 15% at the longer wavelengths and ± 20% at the shortest. The relative accuracy, assuming an averaging period of 1 min, was 2-3%. The results are shown in Figure 1 as measurements of the effective temperature expressed as a percentage of the

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temperature of the unshielded sun. The values of the latter were 9,000 or 11,651 cm (3.2 cm), 21,000 K (3.2 cm), 100,000 K (10 cm). The vertical lines on the diagram represent the limits of diode contact (h in number) and the occultation of certain well-known spots Mrs 188 and 186. A number of points (h) between 3.47m and 3.58 cm are given. An increase in intensity over that might be expected. Figure 2 shows a synoptic chart of the sun. If the Mr 188 group of spots measure 3.47 m, the effective temperature (5.10 K at 1.65 cm and height 0.04 K at 10 cm) may be estimated. The curves for 3.2 cm and 10 cm in Figure 1 are asymmetrical. This may be explained as due to a wedge-shaped equatorial region which increases in brightness towards the eastern limb of the sun. The longer wavelength curves also show a small bump in the trough. This is due to "limb brightening" and it is possible to estimate its amount - 0.8% at the

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shortest wavelength the annulus contributes 4.5% of the intensity of the unshielded sun. The effective radius of the "radio sun" is also estimated as about 4% (depending on wavelength) greater than the optical radius. The deduced values of various constants are in Table 1. Mr. N. M. of China are thanked as are also Chiang Li-hsin, Han Yung, Li Chien. The Ao Sc. USSR are thanked, also A.P. Molchanov, B.M. Budkin, P.P. Litovchenko and A.A. Melnikov. There are 2 figures, 1 table and 2 Soviet References.

ASSOCIATION: Izaledaratel'skiy radiofizicheskiy institut pri Gor'kovekuniversitete (Radioelectronics Research Institute of Gor'koy University)

SUBMITTED: December 9, 1958

Card 3/5

86852

9.2572 (also 1144, 1154)

S/141/60/003/005/005/026
E192/E382AUTHOR: Stankevich, K.S.TITLE: Saturation Effect in a Paramagnetic System with
Three and Four LevelsPERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
Radiofizika, 1960, Vol. 3, No. 5, pp. 765 - 773

TEXT: A paramagnetic amplifier based on the use of four levels was proposed and experimentally investigated by C.R. Ditchfield and P.A. Forrester (Ref. 1). Such a system has a number of advantages as compared with a three-level amplifier and it is therefore of interest to investigate the permeability of the system in the presence of a strong auxiliary field and to take into account the saturation effect. The problem is analysed in this article. It is assumed that a paramagnetic crystal has a system of four energy levels which satisfy the relationship $E_1 < E_2 < E_3 < E_4$ and $E_3 - E_1 = E_4 - E_2$. Two high-frequency fields with frequencies ω_1 and ω_2 are

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E192/E382

Saturation Effect in a Paramagnetic System with Three and Four Levels

applied to the crystal. Since the interaction between the spins of the paramagnetic ions and the crystal lattice is negligible, it is possible to describe their behaviour by a density matrix $\hat{\rho}$. The Schrödinger equation for the density matrix is in the form:

$$\text{i}\hbar \frac{\partial \hat{\rho}}{\partial t} = \hat{H} \hat{\rho} - \hat{\rho} \hat{H} \quad (1)$$

where $\hat{H} = \hat{H}_0 + \hbar V$ is the Hamiltonian of the system, \hat{H}_0 is the Hamiltonian of the paramagnetic system in the absence of the external fields and $\hbar V$ is the interaction energy with the external radiation fields; this energy is defined by:

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Saturation Effect in a Paramagnetic System with Three and Four Levels

$$\hat{V} = \hat{\Psi}^\dagger \left(e^{\frac{i\omega_1 t}{\varphi}} + e^{\frac{i\omega_2 t}{\varphi}} \right); \quad \hat{\Psi} \ll \varphi; \quad (2)$$

$\omega_1 \approx \omega_{13} = \omega_{24}; \quad \omega_2 \approx \omega_{23}$

Since the matrix of the average density $\bar{\rho}$ (averaged over a suitable relaxation time) is of interest, the Schrödinger equation can be written as Eq. (3), where $\delta\bar{\rho}/\delta t$ is given by Eq. (4). Here, at $m \neq n$, $\tau_{mn} = \tau_1$ and at $m = n$, $\tau_{mn} = \tau_2$ where τ_1 is the spin-lattice relaxation time and τ_2 is the spin-spin relaxation time; ρ_o is the value of the density matrix in thermal equilibrium in the absence of the field. When H_o is diagonal, Eq. (3)

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S/141/60/003/005/005/026
E192/E382**Saturation Effect in a Paramagnetic System with Three and Four Levels**

can be written as Eq. (5), where $D(t) = \bar{\rho}(t) - \rho_0(t)$, which represents the deviation of the average density matrix from the instantaneous value of density in thermal equilibrium. The equation for D is thus in the form of Eq. (6), where $\rho_0(t)$ is defined by Eq. (7). By disregarding the transients, it is assumed that the solution of Eq. (6) is in the form of Eq. (8). The parameters R, S, T, Q and U can be obtained from a system of matrix equations; these are given by Eqs. (9). The notation in Eqs. (9) is defined by Eqs. (10). A resonant frequency of the average magnetic dipole moment per unit volume at frequency ω_{23} is given by:

$$P_{23} = 2Re\mu_{32} T_{23}^+ e^{-i\omega_{23} t} = Sp(\hat{u}D) \quad (11).$$

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E192/E382

Saturation Effect in a Paramagnetic System with Three and Four Levels

Consequently, the expression for the permittivity is:

$$\kappa_{23} = 2\mu_{32} T_{23}^+ / H_\infty \quad (\text{d3}).$$

It is seen, therefore, that the problem of determining κ_{23} is equivalent to solving Eqs. (9) with respect to T_{23}^+ ,

which is defined by twenty expressions of the system of Eqs. (9). Finally, it is found that for determining κ_{23} it is necessary to solve sixteen equations defined by the system of Eqs. (14). The solution of this system with respect to T_{23}^+ is in the form of Eq. (15), where δ_1 and δ_2 are given by Eqs. (16) and (17). Consequently, the expression for κ_{23} is given by Eq. (18). From this it follows that the

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Saturation Effect in a Paramagnetic System with Three ~~and~~
Four Levels

permeability for a three-level system is given by Eqs. (19).
The real and the imaginary components of χ_{23} are defined by

Eqs. (20) and (21). For the case when the signal and
pumping frequencies coincide with the transition frequency,
the imaginary component of χ_{23} is expressed by Eq. (24) for

the case of a four-level system and by Eq. (25) for a three-
level system. From Eq. (24) it is seen that for saturated
four-level paramagnetic systems the imaginary component of
the permittivity is negative and independent of the
relationship between ω_{13} and ω_{23} . This property is
particularly valuable for constructing the amplifiers for
mm waves since it is possible to use the pumping frequency
almost equal to the signal frequency. The independence of the

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S/141/60/003/005/005/026
E192/E382

Saturation Effect in a Paramagnetic System with Three and Four Levels

gain of such a system of the relaxation times of various transitions makes it possible to use various types of substances provided their energy-level structure is satisfactory. The author expresses his gratitude to V.M. Fayn and Ya.I. Khanin for discussion and valuable remarks.

There are 6 references: 4 Soviet and 2 English.

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete
(Scientific Research Radiophysics Institute of Gor'kiy University)

SUBMITTED: April 7, 1960

Card 7/7

3. 1710 (1041, 1126, 1127)
9. 9823 (9100 1036)

21167

S/141/60/003/006/006/025
E032/E114

AUTHOR: Stankevich, K.S.

TITLE: Fluctuations in the Radio Emission of the Atmosphere

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika,
1960, Vol.3, No.6, pp. 969-975

TEXT: A calculation is reported of the mean square fluctuation in the effective temperature of the radio emission of the atmosphere ΔT_a^2

It is shown that for wavelengths of about 3 cm the fluctuations are given by

$$\sqrt{\Delta T_a^2} \approx \frac{0.018}{\sqrt{\cos \vartheta}} \text{ °K} \quad (33)$$

where ϑ is the zenith angle ($\leq 85^\circ$). This formula is a special case of a much more complicated formula derived in the present paper which applies to other wavelengths also. The expression obtained for $\sqrt{\Delta T_a^2}$

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21167

S/141/60/003/006/006/025
E052/E114

Fluctuations in the Radio Emission of the Atmosphere

may be used to estimate fluctuations in the aerial temperature of radio telescopes when the width of the polar diagram does not exceed 20'. The paper is entirely theoretical and the derivation is based on the absorption coefficients obtained by S.A.Zhevakin and V.S. Troitskiy (Ref.1), J.H. Van Vleck (Refs 2, 3), water vapour concentration given by V.I. Tatarskiy (Ref.4), and the model of dry standard atmosphere put forward by A.Kh. Khrgian (Ref.5). Acknowledgements are expressed to V.S. Troitskiy and V.A. Razin for discussions and valuable advice.

There are 6 references: 4 Soviet and 2 non-Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy institut
pri Gor'kovskom universitete
(Scientific Research Radiophysics Institute of the
Gor'kiy University)

SUBMITTED: June 7, 1960

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9,9847
3,1730 (1126,1127,1129)

87247

S/053/60/037/006/006/022
E032/E514

AUTHOR: Stankevich, K. S.
TITLE: Monochromatic Radio Emission by Interstellar Molecular Hydrogen Ions

PERIODICAL: Astronomicheskiy zhurnal, 1960, Vol.37, No.6, pp.983-987

TEXT: The increased sensitivity of detectors used in radio astronomy naturally leads to searches for new lines in the radio emission of the Galaxy. In this connection it is of interest to consider the possibility of detecting the radio emission of H_2^+ and H_2^- since these ions should be present in interstellar gas in appreciable concentrations. The present paper is concerned with the calculation of the transition frequency for the hyperfine structure components of the ground state of ions of orthohydrogen H_2^+ . The calculation is based on the non-relativistic Hamiltonian obtained by Frosch and Foley (Ref.2). The calculation takes into account the interaction between the electron and nuclear magnetic moments and the spin-orbit coupling. The wave function for the Σ state of H_2^+ is obtained using the Heitler-London method (linear combination of 1s-states). The transition frequency for the hyperfine structure levels of H_2^+ is found to be 1174 ± 1 Mc/s.

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87247

S/033/60/037/006/006/022
E032/E514**Monochromatic Radio Emission by Interstellar Molecular Hydrogen Ions**

The numerical calculations suggest that in measurements of the absorption line in the spectrum of Cassiopeia A one can detect

$$\int_{\infty}^s N_{H_2^+} dl \approx 7 \cdot 10^{18}$$

Hagen et al. (Ref.7) have shown that measurements of the hydrogen absorption line in the radio spectrum of Cassiopeia A give $\int_{\infty}^s N_H dl \approx (2-4) \cdot 10^{21}$. It is thus to be expected

that using modern radio telescopes it may be possible to detect the radio emission due to molecular hydrogen ions, provided its mean concentration is at least 0.2% of the atomic hydrogen concentration in the medium. However, hydrogen occupies all HI regions and H_2^+ is found only in the boundary layer. Such an average concentration is, therefore, not very probable. There are 9 references: 4 Soviet and 5 non-Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy institut Gor'kovskogo universiteta imeni N. I. Lobachevskogo

CARD 2/2 (Scientific Research Radio Physical Institute of the Gor'kiy University imeni N. I. Lobachevskiy)

SUBMITTED: May 17, 1960

STANKEVICH, K.S.

Sensitivity of radiometers with paramagnetic amplifiers. Izv. vys. ucheb. zav; radiofiz. 5 no.3:609-611 '62. (MIRA 15:7)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete.
(Radio measurements)

STANKEVICH, K.S.

Some remarks on N.A.Armand's article "Fluctuations of atmospheric thermal radiation on centimeter and millimeter wave lengths."
Radiotekh. i elektron 7 no.7:1255-1256 '62. (MIRA 15:6)
(Atmospheric temperature) (Solar radiation) (Microwaves)
(Armand, N.A.)

STANKEVICH, K.S.

Precise measurements of the spectrum of the discrete source
Cassiopeia A on centimeter wavelengths. Astron.zhur. 39 no.4:610-
612 Jl-Ag '62. (MIRA 15:7)

1. Radiofizicheskiy institut Gor'kovskogo gosudarstvennogo
universiteta imeni N.I.Lobachevskogo.
(Stars---Spectra)

14695-63

EMT(d)/EMT(1)/FBD/FCC(w)/BDS/T-2/EEC-2/EED-2/ES(v)/ES(t)-2
NFTC/AFMDC/APG/ASD/ESD-3/SSD Pg-4/P1-4 PT-2/GW

5/0141/63/006/003/0629/0630

89

ACCESSION NR: AP3004850

86

AUTHOR: Lastochkin, V. P., Porfir'yev, V. A., Stankevich, K. S., Troitskiy, W. S., Kholodilov, N. N., Tseytlin, N. M.

TITLE: Precision measurements of radiation intensity from discrete sources in Cas-A, Cyg-A, and Tau-A in the decimeter band

SOURCE: IVUZ. Radiofizika, v. 6, no. 3, 1963, 629-630

TOPIC TAGS: Cas-A, Cyg-A, Tau-A, radiation source, radio source, cosmic source, radiation temperature, antenna temperature, black body

ABSTRACT: Test results and receiving equipment are described for radio reception recorded in the autumn of 1962 from discrete sources in Cas-A, Cyg-A, and Tau-A in the decimeter band. An 8-meter parabolic antenna was used which was designed to track a given source by maintaining an optical match with a visible star pattern in which the source location was known. Tracking error by this means was of the order of $\pm 0.5'$. Operating wavelengths were 25.2, 34.2, 42.4, and 54.3 cm, for which the pattern widths were 150, 200, 240, and 300', respectively. For each source a nearby cosmic region was chosen as a reference point, the same

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ACCESSION NR: AP3004850

point being used for all wavelengths. The receiver used was a wideband modulated type with sensitivity of 0.3-0.4K at a 16-sec time constant. Compensation for temperature drift in the antenna and its cold standard was provided by a gas discharge tube fed via directional coupler to the antenna; a further correction was made for the difference in steady-state background noise levels existing between the measured source and its reference point. Absolute calibration of received signals was made against radiation from a black-body disk "moon" of the type used earlier by Krotikov et al. (Izv. vyssh. uch. zav. - Radiofizika, 4, 1004 (1961)) in similar measurements, which subtended an angle of 56.34' and was elevated 26° above the horizon to minimize diffraction effects. Radiation temperature of the disk fell between 3 and 12K depending on wavelength, while source radiations were in the 4-20K range. The results are tabulated, giving both absolute flux density and density relative to the particular reference calibration area. Flux density tended to increase with longer wavelengths and was generally greatest from the Cas-A source, with a measured maximum of about 50×10^{-24} w/m²/cps at 53.4 cm. The rms errors are included; they had a maximum calculated to be $\pm 10.5\%$. The coordinates of sources and reference areas are given. "The authors are deeply grateful to Ya. M. Parnas and T. V. Shikina under whose direction the coating for the black-body disk was prepared and ASSOCIATION: Radiophysical Scientific Research Inst., Gor'ky Un.

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L17691-63
Pe-4/Pi-4/Pg-4 PT-2

EWT(1)/FHD/FCC(w)/BDS/EEC-2/ES(v) AFFTC/ESD-3

ACCESSION NR: AP3004851

S/0141/63/006/003/0631/0631

76
75

AUTHOR: Lastochkin, V. P.; Plankin, E. S.; Stankevich, K. S.

TITLE: Precise flux density measurement of the discrete source in Cassiopeia-A
at 3.2 cm

SOURCE: IVUZ. Radiofizika, v. 6, no. 3, 1963, 631

TOPIC TAGS: radio source, cosmic radio source, Cassiopeia-A, Cas-A, cosmic radiation, radiation flux density, discrete radio source, radio telescope, radio brightness

ABSTRACT: Results of 3.2-cm radiation recorded from Cas-A in the fall of 1962 proved to agree within 1% with those reported earlier by Stankevich (Astron. zh., 39, 610(1962)) which indicates good repeatability of the method. As before, calibration was against a black-body disk placed in the Fraunhofer zone of the antenna and subtending 8.8' at an elevation of 22°. On the basis of 80 measurements, the flux density at 3.2 cm was found to be 5.14×10^{-24} w/m²/cps, at an overall rms. error of +5%. When combined with existing 10.26-cm data from Cas-A, this yields a spectral index of -0.87 for the centimeter band, which differs

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L 17691-63

ACCESSION NR: AP3004851

somewhat from the presently accepted value of -0.80.

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom
universitete (Scientific Research Institute of Radio Physics, Gorkiy University)

SUBMITTED: 22Jan63

DATE ACQ: 27Aug63

ENCL: 00

SUB CODE: AS

NO REF SOV: 003

OTHER: 001

Card 2/2

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652910001-6

STANKEVICH, K.S.; BONDAR', L.N.

Fluctuations in atmospheric radio emission. Izv. vys. ucheb. zav.,
radiofiz. 6 no.4:669-673 '63. (MIRA 16:12)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri
Gor'kovskom universitete.

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652910001-6"

ACCESSION NR: AP4017031

S/0141/63/006/006/1098/1102

AUTHORS: Lastochkin, V. P.; Stankevich, K. S.

TITLE: Measurement of the absorption coefficient in the atmosphere
in the decimeter radio band

SOURCE: IVUZ. Radiofizika, v. 6, no. 6, 1963, 1098-1102

TOPIC TAGS: radioastronomy, radio emission from sun, radio emission
absorption, decimeter radio band, absorption coefficient, solar
radio emission, solar radio emission absorption

ABSTRACT: Radio emission from the sun was measured with an 8-meter
parabolic antenna at 25, 32.5, 44.3, and 56.5 cm. Errors due to
the variation of the apparatus parameters were eliminated by cali-
bration against radio emission from a nearby mountain, which was
found to be almost absolutely black to the radiation. Absorption
at the zenith was found to be 0.05 dB at all wavelengths. Addi-

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ACCESSION NR: AP4017031

tional checks were made against the intrinsic radiation of the atmosphere. The absorption in the atmosphere was found to be linear with the cosecant of the elevation angle within the range where the effect of the antenna side lobes could be neglected, but the experimental values exceeded those calculated by the Van Vleck theory (Phys. Rev. v. 71, 413, 1947), by an approximate factor 1.8. The discrepancy is attributed to Van Vleck's erroneous assumption of a continuous energy spectrum for the oxygen molecule. Orig. art. has: 1 figure, 9 formulas, and 1 table. "The authors are sincerely grateful to V. S. Troitskiy for interest in the work and for valuable remarks."

ASSOCIATION: Nauchno issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete (Scientific Research Radiophysics Institute of the Gor'kiy University)

SUBMITTED: 04Jan63

DATE ACQ: 18Mar64

ENCL: 01

SUB CODE: PH, AS

NO REF SOV: 002

OTHER: 001

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S/033/63/040/001/002/016
E032/E314

AUTHORS: Lazarevskiy, V.S., Stankevich, K.S. and Troitskiy, V.S.
TITLE: Absolute precision measurements of the flux density of
the 3.2 cm radiation from the Crab and Orion nebulae
PERIODICAL: Astronomicheskiy zhurnal, v. 40, no. 1, 1963,

12 - 16

TEXT: The flux density due to the discrete source Tau A
and the Orion nebula was determined absolutely, using the method
described by one of the authors et al (Izv. vyssh. uch.zav.,
Radiofizika, 4, no. 6, 1961), in which the received signal is
compared with the thermal radio emission of a perfectly black
disc placed in the Fraunhofer zone of the antenna. A parabolic
antenna, 4 m in diameter, was employed. The beamwidth at half-
power points was $37'$ and the real sensitivity of the radiometer
at a time constant of 64 sec was 0.2^0 K. Measurements on the Tau A
radiation were carried out at different parallactic angles. It
was assumed that the degree of polarization was 7% and that the
position angle was 148^0 . Since the reception was carried out with
horizontal polarization, the observations had to be reduced in
Card 1/2

KUZOVLEV, V.V.; STANKEVICH, K.S.

Effective height of absorption of radio waves in the centimeter band in atmospheric oxygen and water vapor. Izv. vys. ucheb. zav.; radiofiz. 7 no.1:175-176 '64. (MIRA 17:3)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete.

ACCESSION NR: AP4024478

S/0141/64/007/001/0175/0176

AUTHORS: Kuzovlev, V. V.; Stankevich, K. S.

TITLE: Effective height of absorption of radio waves in the centimeter band by atmospheric oxygen and water vapor

SOURCE: IVUZ. Radiofizika, v. 7, no. 1, 1964, 175-176

TOPIC TAGS: absorption, absorption by oxygen, absorption by water vapor, radio wave absorption, decimeter band absorption, effective absorption height, absorption height seasonal variation

ABSTRACT: It is found that for a real pressure and temperature distribution in the atmosphere the effective absorption height of oxygen is not constant, but subject to seasonal variations amounting to 5 ± 0.2 , 3.9 ± 0.4 , and 4.6 ± 0.2 km in the summer, winter, and spring or fall, respectively. The reason for the seasonal variation is the dependence of the effective height on the earth's surface

Card 1/2

ACCESSION NR: AP4024478

temperature. The effective height calculated for water vapor shows no regular behavior and has an average value of 1.8 km. The use of the effective height becomes unadvisable during the time of an inversion. Orig. art. has: 1 figure.

ASSOCIATION: Nauchno issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete (Scientific Research Radiophysics Institute at the Gor'kiy University)

SUBMITTED: 10Jun63 DATE ACQ: 15Apr64 ENCL: 00

SUB CODE: AS, PH NR REF SOV: 001 OTHER: 001

Card 2/2

ACCESSION NR: AP4039719

S/0141/64/007/002/0202/0207

AUTHOR: Stankevich, K. S.

TITLE: Radiation spectrum of the discrete sources Cassiopeia-A and Cygnus-A in the centimeter and decimeter bands

SOURCE: IVUZ. Radiofizika, v. 7, no. 2, 1964, 202-207

TOPIC TAGS: radio astronomy, radio spectrum, discrete radio source, centimeter wave, decimeter wave

ABSTRACT: The latest absolute measurements of the radiation fluxes from Cassiopeia A and Cygnus-A obtained at NIRFI and elsewhere were analyzed and compared. In order to check on a hypothesis advanced by the author earlier (Astron zh. v. 39, 609, 1962) that the spectrum of Cassiopeia-A becomes steeper in the centimeter band. It is shown that the spectrum deviates appreciably from the simple relation $A\nu^{-\alpha}$ previously proposed, for whereas the range from 3.2 to 25.2 cm can be well described with a spectral index $\alpha = 0.87$, the transition region between 25.2 and 31.4 cm corresponds to $\alpha \approx 0$ it is shown that while a full theoretical explanation of this singularity is difficult, for lack of data on the spectrum in the range 21 — 10 cm and particularly of wavelength 3 cm, some qualitative interpretation of the

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ACCESSION NR: AP4039719

observed spectrum of Cassiopeia-A can be made by assuming a radio emission spectrum described by a single spectral index $\alpha = 0.8$ over the entire range, with the deviations in the interval from 30 cm to 3 cm regarded as supplementary radiation superimposed on this spectrum. Estimates give a value $\alpha_2 = 1.8$ for this supplementary radiation index. In the case of Cygnus-A the radiation spectrum has an index that increases continuously with frequency, without any kink, from $\alpha = 0.75$ in the meter band to $\alpha = 1.5$ in the centimeter band. Such a radiation can be interpreted as being due to a stationary electron component and "relic" electrons. "The author is grateful to V. A. Razin for a discussion and valuable remarks.: Orig. art. has: 2 figures, 2 formulas and 2 tables.

ASSOCIATION: Nauchno issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete (Scientific Research Radiophysics Institute at the Gor'kiy University)

SUBMITTED: 21Jun63

ENCL: 02

SUB CODE: AA

NR REF Sov: 014

OTHER: 006

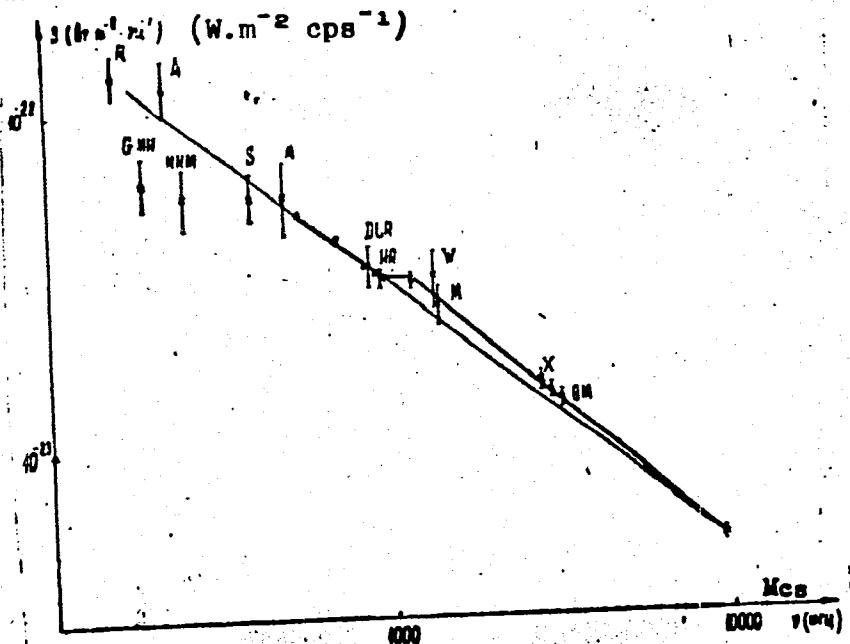
Card

2/4

ACCESSION NR: AP4039719

ENCLOSURE: 01

Spectrum of
discrete source
Cassiopeia-A in
the centimeter
and decimeter bands

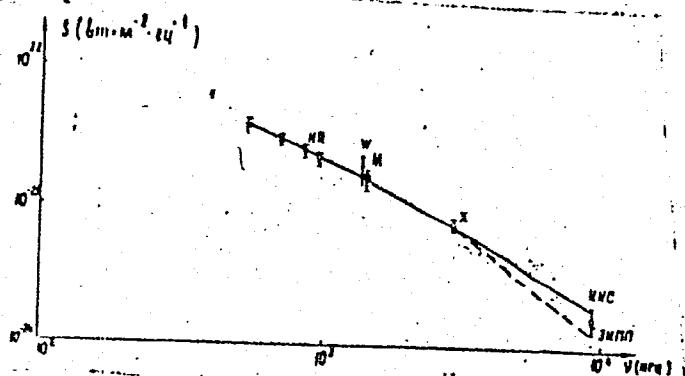


Card

3/4

ACCESSION NR: AP4039719

ENCLOSURE: 02



Spectrum of the discrete source Cygnus-A in the centimeter and decimeter bands

Card 4/4

L 15218-65 FBD/EWT(1)/EWG(v)/EEC-4/EEC(t) Pe-5/Pae-2/Pi-4 ASD(a)-5/
RAE(M(a)/ESD(c)/ESD(t) GW/WS

ACCESSION NR: AP4048272

S/0141/64/007/004/0789/0790

AUTHORS: Lastochkin, V. P., Stankevich, K. S.

B

TITLE: Experimental observation of fluctuations of the temperature
of the atmospheric radio emission

SOURCE: IVUZ. Radiofizika, v. 7, no. 4, 1964, 789-790

TOPIC TAGS: atmospheric noise, radio signal, signal detection, sig-
nal fluctuation

ABSTRACT: An attempt was made to observe experimentally the atmos-
pheric radio emission fluctuations whose existence was theoretically
deduced in an earlier paper by one of the authors (K. S. Stankevich
and L. N. Bondar', Izv. vyssh. uch. zav. -- Radiofizika v. 6, 670,
1963). The tests were made at 3.2 meters with a parabolic antenna
4 m in diameter subtending 36' at the half-power points. The radio-
meter was sensitive to 0.5°K at a time constant of 1 second. The

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L 15218-65

ACCESSION NR: AP4048272

2

measurements were made at a time constant of 16 seconds. The received signal was calibrated against the radio-emission temperature of an absolutely black "mountain" covering the entire principal lobe of the directivity pattern. The method used to exclude the intrinsic noise of the radiometer is briefly described. Although good agreement between theory and experiment could not be obtained under these conditions, the results can be regarded as proof of existence of radio emission from the standard atmosphere. "The authors thank N. G. Denisov for a valuable remark." Orig. art. has: 5 formulas.

ASSOCIATION: Nauchno issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete (Scientific Research Radiophysics Institute at the Gor'kiy University)

SUBMITTED: 06Nov63

ENCL: 00

SUB CODE: EC

NR REF Sov: 004

OTHER: 000

Card 2/2

L 21108-65 EWT(1)/EWA(h) Peb ESD(t) RB

ACCESSION NR: AP5002329

S/0141/64/007/005/0934/0985

AUTHOR: Lastochkin, V. P.; Stankevich, K. S.; Strezhneva, K. M.

TITLE: Measuring the absorption of 3.2-cm radio waves in the atmosphere

SOURCE: IVUZ, Radiofizika, v. 7, no. 5, 1964, 984-985

TOPIC TAGS: radio wave absorption, radio wave measurement 9M

ABSTRACT: In this study of absorption of 3.2-cm radio waves in the atmosphere by oxygen and water vapor, the radiometer used had a sensitivity of 0.5K with a time constant of 1 sec. The antenna dish was 4 m in diameter. Calibration of the received signals was accomplished by comparison with the radiation of an absolutely black body which was situated in the Fraunhofer region and which shielded the major lobe of the radiation pattern. Under the assumption that the effective altitude of radio-wave absorption in oxygen and water vapor is 5 and 1.8 km, respectively, it was found that absorption of 3.2-cm waves in oxygen was 0.054 db and in water vapor, $7 \cdot 10^{-4} \text{ db} \cdot \text{m}^3 \cdot \text{km}^{-1} \cdot \text{g}^{-1}$. The accuracy of these results was $\pm 7\%$. Orig. art. has: 1 figure

Card 1/2

L 21108-65

ACCESSION NR: AP5002329

and 4 formulas.

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy institut
pri Gor'kovskom universitete (Scientific Research Institute of Radio
Physics at the Gorky State University)

SUBMITTED: 06Nov63 ENCL: 00 SUB CODE: EC, ES

NO REF SOV: 002 OTHER: 000 ATD PRESS: 3164

Card 2 / 2

L 21721-65 EEC-4/EWG(v)/EWT(1)/EEC(t)/FBD Pe-5/Pi-4/Pae-2 AFWL/SSD(b)/
BSD/SSD(c)/ASD(a)-5/AFETR/RAEM(a)/ESD(gs)/ESD(t)/SSD GW/WS
S/0033/64/041/004/0769/0770

ACCESSION NR: AP4043962

AUTHOR: Lastochkin, V. P.; Stankevich, K. S.

TITLE: Secular decrease of the flux of Cassiopeia-A in the centimeter range

SOURCE: Astronomicheskiy zhurnal, v. 41, no. 4, 1964, 769-770

TOPIC TAGS: astrophysics, radio emission, artificial moon, Cassiopeia-A, radio astronomy

ABSTRACT: In 1960, I.S. Shklovskiy postulated a possible secular decrease of the radio emission flux of the discrete source Cassiopeia-A, which according to computations should decrease by 1.7% annually. This effect was experimentally confirmed on the basis of a number of relative measurements made in the period from 1949 through 1960 at a frequency of 81.5 Mc/s. It was now considered important to investigate the dependence of this effect on wavelength and make direct measurements of the decrease of the flux by use of precise absolute measurements. The "artificial moon" method was used in September 1961 for precise absolute measurements at a wavelength of 3.2 cm. The flux, equal to $5.20 \cdot 10^{-24} \text{w/m}^2 \cdot \text{cps}$, was determined with a dispersion of 2.5% and the total measurement error did not exceed 3%. In September 1963 these measurements were repeated at the same wavelength; the antenna, calibration disk and their relative placement were the same

Card 1/2

L 21723-65

ACCESSION NR: AP4043962

as in 1961. The receiver finally used was a radiometer with a parametric amplifier having a sensitivity of 0.2K and a time constant of 1 second. The flux was $5.02 \cdot 10^{-24} \text{W/m}^2 \cdot \text{cps}$ with a dispersion of 1.7%. If it is assumed that the errors were distributed in conformity with the normal law, the probability of decrease of the flux of Cassiopeia-A exceeds 90% and the most probable value of the decrease of the flux is 1.7% annually, which is in good agreement with theoretical estimates.

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete (Radio-Physics Scientific Research Institute at Gor'kiy University)

SUBMITTED: 03Dec63

ENCL: 00

SUB CODE: AA

NO REF SOV: 003

OTHER: 001

Card 2/2

LASTOCHKIN, V.P.; STANKEVICH, K.S.

Experimental determination of fluctuations in the temperature of atmospheric radio emission. Izv.vys.ucheb.zav.; radiofiz. 7 no.4:789-790 '64.
(MIRA 18:1)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete.

LASTOCHKIN, V.P.; SORIN, Yu.M.; STANKEVICH, K.S.

Spectrum of radio emission of the discrete source of
Cygnus-A. Astron. zhur. 41 no.4:770-771 Jl-1g '64
(MIFI A 17:8)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri
Gro'kovskom universitete.

L 34469-65 FBD/EWT(1)/EWG(v)/EEC(t)/EEC-4 Pe-5/Pee-2/Pi-4 RB/GW/WS-4

ACCESSION NR: AP5006030

S/0141/64/007/005/1186/1187

34
33

B

AUTHOR: Kamenskaya, S. A.; Stankevich, K. S.

TITLE: Measurement of radio wave absorption in the atmosphere at an altitude of 3200 m above sea level on the 1.6-cm wavelength

SOURCE: IVUZ. Radiofizika, v. 7, no. 6, 1964, 1186-1187

TOPIC TAGS: radio emission, atmospheric radio emission, radio wave absorption

ABSTRACT: The measurements were based on vertical temperature distribution of thermal radio emission in the 30-5° altitude interval. The radio telescope had a radiation pattern width of 36' at half-power points, sensitivity of several degrees, and a time constant of 1 sec. The brightness temperature of the atmospheric radio emission was determined by comparing antenna temperatures during reception with the radio emission of an absolutely black mountain located in the Fraunhofer region. The mountain completely covered the major lobe of the pattern. Under standard atmospheric conditions (moisture, 7.5 g/m³) at the zenith, the value of total absorption in oxygen and water vapor was determined as 0.09 ± 0.02 db. Orig. art. has: 1 figure.

[DW]

Card 1/2

L 34469-65

ACCESSION NR: AP5006030

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete (Scientific Research Institute of Radio Physics at Gorky State University)

SUBMITTED: 16Apr64

ENCL: 00

SUB CODE: ES, EC

NO REF SOV: 001

OTHER: 000

ATD PRSS: 3213

Card 2/2

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652910001-6

LASTOCHKIN, V.P.; STANKEVICH, K.S.; STREZHNEVA, K.M.

Measurement of atmospheric radio wave absorption at the wavelength
= 3.2 cm. Izv. vys. ucheb. zav., radiofiz. 7 no.5:984-985 '64.
(VIBA 18:2)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kov-
skom universitete.

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652910001-6"

KAIENSKAYA, S.A.; STANKEVICH, K.S.

Measurement of radio wave absorption in the atmosphere at an altitude of 3200 m. above sea level at a wavelength of 1.6 cm.
Izv. vys. ucheb. zav.; radiofiz. 7 no.6:1186-1187 '64.
(MIRA 18:3)

I. Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete.

STANKEVICH, K.S.

Nonresonance radio wave absorption in molecular oxygen. Izv. vuz. fiz.
ucheb.zav.; radiofiz. 3 no.1:98-303 '65.

(NIKA 13:6)

I. Nauchno-issledovatel'skly radiofizicheskiy institut pri Gor'kiy
kovskom universitete.

L 7870-66 EWT(d)/FBD/EWT(1)/EEC(k)-2 RB/GW/WS-2

ACC NR: AP5026722

SOURCE CODE: UR/0141/65/008/005/1044/1044

AUTHOR: Krotikov, V. D.; Lastochkin, V. P.; Stankevich, K. S.

ORG: Scientific Research Institute of Radio Physics at Gorky University
(Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete)

TITLE: Measurement of the absorption of decimeter radio waves in the atmosphere

SOURCE: IVUZ. Radiofizika, v. 8, no. 5, 1965, 1044

TOPIC TAGS: radio astronomy, atmospheric radiation, radio wave absorption, decimeter wave

ABSTRACT: The vertical distribution of the temperature of the intrinsic radiation of the atmosphere was measured at wavelengths 16.3, 18.9, 21, and 30.6 cm in the altitude range from 5 to 30°. The directivity patterns of the antenna system at half-power level were 24', 30', 35', and 40'. The brightness temperatures of the atmosphere were determined by comparing the antenna temperatures for signals from the atmosphere with the discrete source Cassiopaeia-A. The total absorption at the zenith could be determined from the measured and theoretical values of the antenna temperature as a function of the altitude angle. The total absorption in the zenith direction was found to be 0.66 db ±1% for all temperatures, corres-

Card 1/2

UDC: 621.371.166

L 7370-66

ACC NR: AP5026722

ponding to a zenith temperature of 4.1K for the radio emission from the atmosphere.
Orig. art. has: 2 formulas.

[02]

SUB CODE: 03,17/ SUBM DATE: 23Apr65/ ORIG REF: 002/ ATD PRESS: 4145

Card 2/2

L-1069-65 FED/EWT(1)/EWG(v)/EEC-4/EEC(t) Pe-5/Pae-2/Pi-4 RB/GV/NS-4
ACCESSION NR: AP5010109 UR/0109/65/010/004/0755/0756 39

AUTHOR: Bondar', L. N.; Krotikov, V. D.; Stankevich, K. S.; Tseytlin, N. M. B

TITLE: Measurements of decimeter-wave absorption in the atmosphere

SOURCE: Radiotekhnika i elektronika, v. 10, no. 4, 1965, 755-756

TOPIC TAGS: radio wave absorption, atmospheric thermal radiation, radiation temperature distribution

ABSTRACT: Radio wave absorption was measured from the natural thermal radiation of the atmosphere at the 31.2-, 40.5-, and 58.6-cm wavelengths. The corresponding directional patterns of the antenna system were 38, 52, and 72° at the half-power points. The vertical distribution of the radiation temperature was recorded at night, in clear weather, and at altitudes ranging from 5 to 50°, with the directional pattern of the radio telescope passing through the high galactic latitudes. The radiation temperature brightness was determined by comparing antenna temperatures during reception to those on discrete source Cassiopeia-A. Curves of atmospheric radiation temperature vs altitude are plotted in Fig. 1 of Enclosure. The total absorption in the direction of the zenith calculated at the investigated wavelengths was 0.06 db +15%. Orig. art. has: 1 figure. [JR]

Card 1/8

SUBMITTED: 14 APRIL 64

I 63091-65 FBD/EWT(1)/ENG(v)/EEC-4
ACCESSION NR: AP5020354

GW/WS-4

UR/0141/65/008/003/0437/0440
523.164.4

AUTHOR: Bondar', L. N.; Krotikov, V. D.; Stankevich, K. S.; Tseytlin, N. M.

55 55 55 55

d6

44

55

B

TITLE: Spectra of some remnants of supernovas in the decimeter band

SOURCE: IVUZ. Radiofizika, v. 8, no. 3, 1965, 437-440

TOPIC TAGS: radio astronomy, decimeter wave, spectrum analysis, supernova

ABSTRACT: The spectra of sources SN 1572, IC 443, and W 44 were investigated on decimeter band frequencies of 960, 740, and 513 Mc using a radiometer with a sensitivity on the order of 10K at a 1 second time constant and a nearly linear response in the working portion of its dynamic range. It was calibrated against Virgo-A, Cygnus-A, and Cassiopeia-A. Extended sources IC 443 and W 44 had identical spectral indices in the decimeter and meter bands, but SN 1572 exhibited a different spectral index in the region from 178 to 513 Mc ($\alpha = 0.23$) than in the rest of the meter and decimeter bands ($\alpha = 0.68$). Tables cite data for 960, 740, and 513 Mc. Orig. art. has: 2 tables.

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom

Card 1/2

L 63091-65

ACCISSION NR: AP5020354

universitate (Scientific Research Radiophysics Institute at Gor'kiy University)

55

SUBMITTED: 05Aug64

ENCL: 00

SUB CODE: AA

NO REF Sov: 005

OTHER: 006

bab.
Card 2/2

L 1940-66 FBD/EWT(1) GW/WS-2

ACCESSION NR: AP5020672

UR/0033/65/042/004/0705/0708
523.164.42AUTHOR: Lastochkin, V. P.; Lukin, E. B.; Stankevich, K. S.; Tseytlin, N. M.

TITLE: Using lunar occultations to study the Crab Nebula

SOURCE: Astronomicheskiy zhurnal, v. 42, no. 4, 1965, 705-708

TOPIC TAGS: radio astronomy, nebula, lunar phenomenon

ABSTRACT: During lunar occultation of a discrete source, the radio waves emitted by the source are diffracted by the surface of the moon, and an observer on the earth sees a distribution of intensities which corresponds to the Fresnel diffraction region. An occultation can be considered as a diffraction on the edge of an infinite half-screen. The width of the interference bands generated by superposition of the direct rays and those reflected from the spherical lunar surface, in a plane perpendicular to the incident rays and passing through the center of the moon, being

$$\delta = \frac{3}{2} a \left(\frac{\lambda}{4a} \right)^{1/2}$$

(where a is the radius of the moon), is smaller by a factor of $10^2 - 10^3$ than

Card 1/4

L 1940-66

ACCESSION NR: AP5020672

the first Fresnel zone $\sqrt{\lambda R}$ (R is the distance to the moon), and consequently the average distribution of the field cannot be altered by possible interference effects. Experimental data on the distribution of intensity during occultations of a source with extremely small angular dimensions agree well with the diffraction pattern of an infinite half-screen. Ordinarily, the antenna is directed toward the discrete source during observation of an occultation, so that the moon is a moving screen. If temperature changes in the antenna due to passage of the moon through the radiation pattern during occultation of the source are disregarded, then the antenna temperature is proportional to:

$$T_A \sim \int \int_{-\infty}^{\infty} F(\theta, \phi) T(\theta, \phi) I(\theta - x, \phi) d\theta d\phi,$$

where the θ axis is along the direction of motion of the source, $F(\theta, \phi)$ is the antenna pattern, $T(\theta, \phi)$ is the distribution of brightness from the source, and $I(\theta - x, \phi)$ is the distribution of intensity from a point source for the case of diffraction on the edge of an infinite half-screen.

$$I(\theta - x) = \left\{ C \left[(\theta - x) \sqrt{\frac{\pi R}{\lambda}} \right] + \frac{1}{2} \right\}^2 + \left\{ S \left[(\theta - x) \sqrt{\frac{\pi R}{\lambda}} \right] + \frac{1}{2} \right\}^2$$

Card 2/4

L 1940-66

ACCESSION NR: AP5020672

and

$$C(w) = \sqrt{\frac{2}{\pi}} \int_0^w \cos \eta^2 d\eta \quad \text{and} \quad S(w) = \sqrt{\frac{2}{\pi}} \int_0^w \sin \eta^2 d\eta$$

10

are Fresnel integrals. It is shown that diffraction effects should be taken into account in the reduction of occultation curves even when the source is extended. Three occultations of the Crab Nebula by the moon were observed at 535, 180, and 412 Mc. These occultations were used to obtain data on the angular dimensions of the nebula and on the shift of the effective emission center. The position of the emission center for the nebula is given in Table 1 of the Enclosure, where α and δ are given for points of the source located on the intersection of the source direction of motion with the edge of the lunar disk. "The authors are sincerely grateful to A. G. Kuntsevich and V. S. Lazarevskiy for making the astronomical calculations, and to O. N. Shipule and G. N. Nikulin for help in making the measurements." Orig. art. has: 4 figures, 6 formulas, 1 table. [14]

ASSOCIATION: Radiofizicheskiy institut Gor'kovskogo gos. universiteta (Radio-physics Institute, Gorky State University)

55

SUBMITTED: 22Dec64

ENCL: 01

SUB CODE: AA

NO REF Sov: 002

OTHER: 005

ATD PRESS: 4115

Card 3/4

L-194(1)-66

ACCESSION NR: AP5020672

ENCLOSURE: 01

Table 1.

Frequency, Mc	Transit time of the edge of the moon through the center of the source	α (1950)	$\Delta\alpha$	δ (1950)	Angular diameter	Positional occultation angle
535	18 ^h 59 ^m 9 ^s	5 ^h 31 ^m 30 ^s 9	$\pm 0.2^s$	21°59'4"	5.5'	74°
535	20 ^h 07 ^m 3 ^s	5 ^h 31 ^m 20 ^s 3	$\pm 0.2^s$	21°59'3"	5.5'	278°
180	14 ^h 03 ^m 5 ^s	5 ^h 31 ^m 31 ^s 4	$\pm 0.4^s$	21°59'4"	5.5'	108°
180	15 ^h 07 ^m 0 ^s	5 ^h 31 ^m 29 ^s 6	$\pm 0.45^s$	21°59'3"	6'	236°
412	-	-	-	-	6'	127°

Card 4/4

L 29195-66 EWT(1)/T WR
ACC NR: AP6008281

SOURCE CODE: UR/0109/66/011/003/0451/0455

AUTHOR: Stankevich, K. S.; Tseytlin, N. M.

ORG: none

TITLE: Effect of exciter defocusing on the accuracy of antenna measurements

SOURCE: Radiotekhnika i elektronika, v. 11, no. 3, 1966, 451-455

TOPIC TAGS: antenna, antenna calibration

ABSTRACT: Variation of maximum antenna gain with distance is considered for various values of the phase error at the aperture which may be caused by an out-of-focus condition of the exciter. Small error in conventional antenna measurements at $R \geq 2D^2/\lambda$ is ensured only with cophasal irradiation of the aperture (the exciter situated in the mirror focus). In real antennas, an out-of-focus condition changes the gain ratio G_R/G_∞ , which must be taken into account in accurate

Card 1/2

UDC: 621.396.67.012.12

L 29195-66

ACC NR: AP6008281

(within a few per cent) antenna calibrations. The effect of exciter displacement along the axis of symmetry on the G_A/G_∞ ratio is considered in detail; formulas and curves for uniform and Gaussian distributions of amplitudes over the aperture permit calculating the above ratio. The above results assume a point source of radiation. For an extended source, US NBS formulas are used (Ming-Kuei Hu, J. Res., NBS, 1961, 65D, 2, 137). "The authors wish to thank V. S. Troitskiy for discussing results and lending the experimental data." Orig. art. has: 4 figures and 13 formulas.

SUB CODE: 09 / SUBM DATE: 25Nov64 / ORIG REF: 004 / OTH REF: 001

Card 2/2 BLG

L 29196-66 EWT(d)/EWT(1)/EEC(k)-2/FCC GW/WS-2
ACC NR: AP6008280 SOURCE CODE: UR/0109/66/011/003/0445/0450

AUTHOR: Stankevich, K. S.

33
B

ORG: none

TITLE: Absorption of centimeter and decimeter radio waves by molecular oxygen
in the atmosphere

SOURCE: Radiotekhnika i elektronika, v. 11, no. 3, 1966, 445-450

TOPIC TAGS: radio wave absorption, atmospheric physics

ABSTRACT: The J. H. Van Vleck nonresonant relaxation-type radio-wave absorption theory (Phys. Rev., 1947, v. 71, no. 3, p. 413) is disputed. The absorption observed in practice can be better explained by a spin-spin interaction between oxygen molecules. Careful measurements of absorption at 8, 9, 10, 11, 12, 13, 14, 15, 18.1, 21, 25.7-cm wavelengths were conducted using the same

Card #2

L 29196-66
ACC NR: AP6008250

method for all wavelengths. The effective altitude of the absorbing atmosphere, largely dependent on the atmospheric temperature, equals $H_{eff} = 5 \pm 0.2$ km for summer and 3.9 ± 0.4 km for winter (Van Vleck's $H_{eff} = 5.3$ km). New measurements at $\lambda = 10$ cm conducted by radio-astronomic methods at sea level and at 3.2 km above the sea level yielded $H_{eff} = 4$ km. Using the latter value as a basis, new values of total radio absorption in the atmosphere are given (tabulated) for 3.2-58.2-cm waves. Orig. art. has: 1 figure, 19 formulas, and 2 tables.

SUB CODE: 04, 09 / SUBM DATE: 25Nov64 / ORIG REF: 008 / OTH REF: 004

Card 2/2

B16

STANKEVICH, K.V.

Characteristics of new summer varieties of apple. Biul.nauch.-
tekhn.inform.TSGL no.2:24-28 '56. (MIEA 12:1)
(Apple--Varieties)

STANKEVICH, K.V.

Characteristics of new fall varieties of apple. Biul. nauch.-tekhn.
inform. TSGL no.4:82-87 '57. (MIRA 12:1)
(Apple--Varieties)

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652910001-6

STANKEVICH, L.

An improved inspection pit. Avt. transp. 34 no. 7:34 J1 '56.
(MLRA 9:10)

(Automobiles--Maintenance)

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652910001-6"

STANKEVICH, L. A.

STANKEVICH, L.A.; KOVALIKHINA, N.F., tekhnicheskiy redaktor.

[Efficiency and inventiveness in road construction; the repair
of road building machines] Ratsionalizatsiya i izobretatel'stvo
v dorozhnom stroitel'stve; remont dorozhnostrоitel'nykh mashin.
Moskva, Izd-vo dorozhno-tehn. lit-ry, 1953. 58 p. (MLRA 7:8)
(Road machinery--Repairing)

S. "V.", "V."

"The Clinical Treatment of Approachable Forms of Schizophrenia in the
Loyal Psychiatric Clinic Leningrad." Comit Med Sci, Central Inst for the Advanced
Training of Physicians, 16 Nov 54. (RM, 27 Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR
Higher Educational Institutions(1C)

SO: Sum. No. 481, 5 May 55

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AUTHOR:

Ginsel'farb, Ya.K.

The Ukrainian Republican Scientific and Practical Conference on the Etiology, Laboratory Diagnosis, Epidemiology and Prophylaxis of Epidemic Hepatitis [Bokin's Disease]

Journal Aktocholozh. i Epidemiologii i Immunobiologii, 1959, No 9, pp 155-157 (USSR)

ABSTRACT:

The Republican Conference on Epidemic Hepatitis was held in Odessa from 2 to October 1959 and was attended by 360 persons, mainly practicing epidemiologists from sanitary-epidemiological stations, representatives of all the Ukrainian Institutes of Epidemiology and Microbiology and some of the medical institutes. In addition, delegates attended from the Institute of Virology and Infectious Diseases of the ANU, the Leningrad Experimental Institute of Experimental Veterinary Medicine (Institute of Experimental Medicine, Leningrad), the Leningradsky Sanitarno-Meditsinskii Naukovedchesky Institut (Sanitary-Hygienic Medical Institute, Leningrad), and also the Kazan, Vinnytsia, Tashkent, Tbilisi, Gor'kiy, Chita, Astrakhan and Kubanovsk Institutes of Epidemiology and Microbiology and Institutes of Vaccines and Serums. The Conference heard 42 papers, divided among 5 sections. Papers were presented on: the cultivation of the causative agent of endemic hepatitis in developing foci of disease (I.I. Kravchenko), in human embryonic hepatic tissue (A.A. Morozov), in Leningrad, and in explanted human embryonic tissue (M.M. Sudnikova and I.A. Krasava, Tashkent); M.E. Gilmazov reported on the complete fixation reaction with non-bacterial antigen for the specific diagnosis of Boktin's disease. Verifying observation on this reaction were made by M.B. Trokurykova and colleagues of the Institute of Infectious and Tropical Diseases of the USSR Academy of Medical Sciences of the ANU, USSR, by I.P. Shevechko (Kiev), N.M. Karapetyan (Leningrad), M.N. Al'ymik (Gorkiy), and K.N. Stepanova (Ashkhabad). According to the Odessa Institute of Epidemiology and Microbiology, this reaction can be used for detecting virus antigen in feces (Ya.Y. Lyzonets) and detecting a rise in the complement fixation antibody titer in patients (R.M. Sel'nikova). M.V. Serebryakov and G.D. Glinsky (Moscow) spoke on the diagnostic value of determining the aldolase activity. A.L. Kandemirli (Leningrad) spoke on the diagnostic value of determining the proconveratin. Professor V.A. Sezenin (Leningrad), M.L. Mat'jukova (Moscow) and T.M. Gol'dfisheva (Tula) analyzed the epidemiological features of Boktin's disease. Y.P. Andreevskaya (Odessa) and Z.E. Ponomina (Kiev) spoke on the general course of infection with Boktin's disease. P.S. Shishkin, L.S. Shmelevich (Kiev) and A.P. Larchenko (Poltava) presented a conference of air-droplet transmission of infectious papers on the influence of air-droplet transmission of infection. Corresponding Member of the ANU, USSR Professor N.I. Borzilov and A.F. Sotov (Kiev) demonstrated the epidemiological importance of borovik and jaundice forms of Boktin's disease. I.U. Romashko (Kharkov) and M.D. Al'zakun (Gorkiy) summarized the successful results of gamma-hlobulin treatment of persons who had been in contact with endemic hepatitis patients.

The Conference agreed on the need for a step and the global investigation of such patients in the USSR and for a monograph on the etiology and epidemiology of Boktin's disease.

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Card 3/4

TISHCHENKO, I.T.; STANKOVICH, L.A.

Some epidemiological features of the morbidity of epidemic hepatitis
(Botkin's disease) in Kiev during a six-year period. Zhur.mikrobiol.
epid.i immun. 31 no.1:142-143 Ja '60. (MIRA 13:5)

1. Iz Kiyevskoy gorodskoy sanitarno-epidemiologicheskoy stantsii.
(KIEV--HEPATITIS, INFECTIOUS)

SOFIYENKO, N.Ya.; STANKEVICH, L.A.

Rare cases of typhoid fever complications and their epidemiological significance. Vrach. delo no.4:136-137 Ap '61. (MIRA 14:6)

1. Kiyevskaya gorodskaya sanitarno-epidemiologicheskaya stantsiya.
(TYPHOID FEVER)

PANYSHEVA, I.I.; STANKEVICH, L.A.

Indicator method for the detection of diphtheria bacilli. Lab. de-
lo 10 no.3:183 '64. (MIRA 17:5)

1. Dorozhnaya sanitarno-epidemiologicheskaya stantsiya Gor'kovs-
koy zheleznoy dorogi.

STANKEVICH, L.A.

Clinical characteristics of periodic schizophrenia according
to catamnestic data. Zhur. nevr. i psikh. 64 no.1:85-92 '64.
(MIRA 17:5)

I. Dispansernoye otdeleniye (zaveduyushchiy - doktor med.
nauk N.M. Zharikov) Instituta psichiatrii AMN SSSR, Moskva.

ZHARIKOV, N.M.; LEVIT, V.G.; POPOVA, M.S.; RATNER, I.O.; STANKEVICH, L.A.;
SHMAONOVA, L.M.

State of schizophrenia treatment based on data of an
outpatient study. Zhur. nevr. i psikh. 64 no.6:911-918 '64.
(MIRA 17:12)

1. Institut psikiatrii AMN SSSR, Moskva.

L 29188-66 EWT(1)/T JK

ACC NR: AP6019122

SOURCE CODE: UR/0016/65/000/011/0138/0138

A U T H O R : T r u k h a n , P . T . ; T i s h c h e n k o , I . T . ; S t a n k e v i c h , L . A . ; P o p o v a , A . A . ;
D o b r o v s k a y a , A . R .

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O R G : Kiev Institute for the Advanced Training of Physicians (Kiyevskiy institut usovershenstvovaniya vrachey); Kiev Municipal Sanitary-Epidemiological Station (Kiyevskaya gorodskaya sanitarno-epidemiologicheskaya stantsiya); Podol'skiy Area Sanitary-Epidemiological Station, Kiev (Sanitarno-epidemiologicheskaya stantsiya Podol'skogo rayona Kiyeva)

6

T I T L E : Use of gamma globulin to prevent i n f e c t i o u s h e p a t i t i s in children. II. Results of epidemiological observations among groups of children. This paper was presented at the meeting of the Kiev City Society of Microbiologists, Epidemiologists and Infectious Diseases Specialists on 30 September 1964.

S O U R C E : Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 11, 1965, 138

T O P I C T A G S : gamma globulin, hepatitis, epidemiology, immunization, man

A B S T R A C T : In September 1963 some 5000 children in nurseries, kindergartens, and grade schools in Kiev were i m m u n i z e d with a single 3 ml dose of human gamma globulin while an equal number served as controls. The observation period of 12 months consisted of two intervals: (1) October 1963 to May 1964 and (2) June to September 1964. The incidence of hepatitis among the

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immunized children was one-third that in the controls, and there were five times fewer cases during the first interval than in the controls and half as many cases during the second interval. The effectiveness of the gamma globulin subsequently decreased, apparently because of a weakening of immunity.

To check the epidemiological effectiveness of gamma globulin injections, some 1,600 children were immunized with the substance while an equal number served as controls. After 8 months of observation the hepatitis rate was one-seventh of that prior to immunization, suggesting that a fairly high level of immunity can be created with an immune layer of 50%.

The authors concluded that human gamma globulin is a useful means of preventing infectious hepatitis. September is the best month to administer it in Kiev because the fall and winter are the most dangerous seasons for the disease. In addition to the principal authors, the following epidemiologists of the Podol'skiy Area Sanitary-Epidemiological Station, Kiev, took part in the organization of the work and the observations: M. P. Petrova, A. A. Ryzanskaya, S. F. Trigubov, A. M. Rabinovich and S. S. Gel'zer. /JPRS/

SUB CODE: 06/ SUBM DATE: 02Nov64 /

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UDC: 616.36-002.12-084.47:615.37-053.2

LYUTKEVICH, Ye.M.; STANKEVICH, L.I.

The Pestovo-Maksatikha uplift on the northwestern spur of the
Moscow synclase. Geol.sbor. no.3:169-184 '55. (MLR 8:6)
(Moscow Region--Geology, Structural)

STANKEVICH, L.I.

New data on the stratigraphy of the Lower Ordovician in the
Russian Platform. Dokl. AN SSSR 105 no.2:343-344 '55.(MLRA 9:3)

1. Представлено академиком Д.В. Маликиным.
(Russian Platform--Geology, Stratigraphic)

STANKEVICH, L.I.

Mineralogical composition of brown iron ores in the Kerch deposit.
(MIRA 11:4)
Geol. zhur. 17 no.4:23-32 '57.
(Kerch Peninsula--Iron ores)

STANKEVICH, Lyudmila Ivanovna; DOLMATOV, P.S., vedushchiy red.;
BRUSKIN, D.M., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Key wells of the U.S.S.R.; Pestovo key well (Novgorod Province)].
Pestovskaya opornaia skvazhina (Novgorodskaya oblast'). Leningrad,
Gos.nauchno-tehnicheskoe izd-vo neft.i gorno-toplivnoi lit-ry,
Leningr. otd-nie, 1961. 91 p. (Leningrad. Vsesoiuznyi
neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut.
(MIRA 15:8)
Trudy, no.182).

(Novgorod Province--Petroleum geology)
(Novgorod Province--Gas, Natural--Geology)

PEYSIK, M.I.; STANKEVICH, L.I.; YAROSHENKO, V.N.

State of underground gas storage in the Leningrad industrial
area. Trudy SGPK no.3:103-124 '62. (MIRA 15:10)
(Leningrad region—Gas, Natural—Storage)
(Prospecting)

STANKEVICH, L. O.

PA 57T46

USER/Geal Prospecting
Petroleum

Nov/Dec 1947

"Experience in Organization of Micropetrographic Research in Field Parties in Siberia," L. O. Stankevich, G. I. Gendrikhovskaya, 3 pp

"Razvedka Nedr" No 6

Discusses technical problems met in making microscopic studies of rocks during geological expeditions.

LC

57T46

STANKEVICH, L.O.

Mineralogy of carbonate concretions from Cimmerian beds. L. O. Stankevich and V. V. Yarivnik (Dnepropetrovsk). Mineralog. Sbornik, Izdat. Geol. Obschestva 4, 319-20 (1950).—The siderite and manganeseous ankerite components are noted in particular.
Mário Siegrist

STANKEVICH, L. O.

"Contribution to the Mineralogy of the Sedimentary Ore Deposits in the Southern Ukraine and Crimea." Dr Geol-Min Sci, Moscow State U, Moscow, 1954. (RshGeol, Feb 55)

SO: Sum. No. 631, 26 ug 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

STANKEVICH, L.O.

Calcium redechresite in the Kerch deposits. Dekl.AN SSSR 105
no.6:1328-1331 D '55. (MIRA 9:4)

I.Dnepropetrovskiy gornyy institut imeni Artema. Predstavlene
akademikom N.M.Strakhovym.
(Kerch Peninsula--Manganese ores)

STANKEVICH, L.O.

Composition and origin of metalliferous silicates in the Kerch
deposit. Min.sbor. no.11:159-169 '57. (MIRA 13:2)

1. Gornyy institut imeni Artyoma, Dnepropetrovsk.
(Kerch Peninsula--Silicates)

STANKEVICH, L. O.

Doc Geol-Min Sci - (diss) "Mineralogy of sedimentary ore deposits
of the south of the Ukraine and the Crimea." Moscow, 1959. 15 pp;
(Moscow Order of Lenin State Univ imeni M. V. Lomonosov); 150
copies; price not given; (KL, 10-61 sup, 209)

STANKEVICH, L.O.; GENDRIKHOVSKAYA, G.Ch.

Calcium rhodochrosite of the Kamysh-Burun trough. Min. sbor.
no.16:435-441 '62. (MIRA 16:10)

1. Gornyy institut imeni Artyoma, Dnepropetrovsk.
(Kerch Peninsula—Rhodochrosite)

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652910001-6

STANKEVICH, M.

Making plain and reinforced concrete products on press-roll
machines. Stroi.mat., izdel.i konstr. l no.11:13-16 N '55.
(MLRA 9:5)

(Reinforced concrete)

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652910001-6"

STANKEVICH. M.I.

Use of a fast method for the cytological diagnosis of malignant neoplasms. Lab.delo no.6:13-16 N-D '58 (MIRA 11:12)

1. Iz Ob'yedinennoy gorodskoy bol'nitsy No.28 (glavnnyy vrach M.A. Pastukhova) Oktyabr'skogo rayzdravotdela, Moskva.
(CANCER)

STANKEVICH, M.I.

Cytological study of breast tumors. Lab. delo 8 no.3:22-24 Mr '62.
(MIRA 15:5)

1. 28-ya Gorodskaya bol'nitsa (nauchnyy rukovoditel' - dotsent S.L.
Gorelik, glavnnyy vrach M.A.Pastukhova), Moskva.
(BREAST--TUMORS) (DIAGNOSIS, CYTOLOGIC)

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652910001-6

STANKEVICH, M.K., inzh.

Pressed and rolled concrete. Biul. tekhn.inform. 4 no.9:4-?
S '58. (MIRA 11:10)
(Precast concrete)

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CIA-RDP86-00513R001652910001-6"

STANKEVICH, M.K., kand.tekhn.nauk

Rolling reinforced concrete products under high pressures. Trudy
NIIZHNB no.21:122-126 '61. (MIRA 14:12)

1. TSentral'naya nauchno-issledovatel'skaya laboratoriya No.3.
(Precast concrete)